

HOME COMPUTING WEEKLY

AN ABOVE SPECIALIZED PUBLICATION

September 24-30 1985 No. 125 30p



Blockbusters bargain bundle

Five short buying games are being brought together in a compilation entitled "They Sold a Million".

The games are: Beach Head (CDS Gold), Duty Menuson's Decision (CDS), Jet Set Willy (Software Projects) and Ark Asak (Ultimate).

The package will be marketed under the label "Ravens" and will be available for Spectrum, Amstrad and C64 including at £9.95 (inc. £3.50 p.p.).

The C64 version will feature both of "Ravens" in place of Ark Asak. "They Sold a Million" is called because combined sales of the four titles have topped the million mark, and for of special reference to Amstrad users as Jet Set Willy and Ark Asak have been chosen specifically for this compilation.

The five software houses involved in the project as a break-through in co-operation, because computer games as David Ward said, "The software producers have worked together to give the public a really good deal for Christmas - the industry is often perceived as fairly selfish, and this proves we are capable of working in harmony".

"They Sold a Million" will be marketed in a boxed five-disc format with one game per side so that each of the quarter of sales can be easily found and loaded.

For the linguistically inclined the packaging will be in English, French, Spanish and German in addition to the English text.

M. S. Gold's Good Bytes said "We are expecting to achieve substantial sales throughout Europe". "They Sold a Million" will be released in the first week of November.

M. S. Gold have their own compilation on the way called "The Arsenal Hall of Fame", featuring Splinter, Tappers, Up and Down, Arctic Challenge and Blue Hills. The package is scheduled for release before Christmas for the C64, price £9.95. A disk version will also be available, but the price has yet to be decided.



In the market about to be saturated with bargain compilations, making games simply available for the one game compilations instead of buying the original.

Soft Alexander who marketed "New Clusters" left there was roots in the market for more compilations.

The new release market may suffer but for the other hand the market seems to be picking up and these compilations mainly appeal to first time buyers. So in effect they represent extra business rather than

taking a large proportion of the market.

"Compilations have been around for a long time but what is new is the buying experience that these games from different companies can be included. There's nothing worse than seeing brand old titles being crated in."

"Compilations haven't for the recent market and in the same way I don't think they will seriously affect the software market."

Nick provided that a follow up to "New Clusters" is a preparation. He is organizing for forwarding titles from other companies that will involve a promotional incident would be "amateur".



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competition
from



Reviewed
Inside



plus
five pages
of software
reviews

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reviewed p.38

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the grilling
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for the Amstrad
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Games for Amstrad,
BBC, C64 and
Spectrum

All the new
releases
p.10

Trivia

A family game for 2 to 4 players in which mum is just as much at home as the sports crazy son.

Over 2000 questions on six subjects like Entertainment - Sports - History.

C64 - Amstrad - Atari - BBC - Spectrum £7.95



Penalty

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C64 - £6.95

Spectrum - Amstrad

Atari - BBC - MSX SOON



SLAP SHOT

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One player or two player option.

C64 - Amstrad - MSX £8.95



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C64 - Amstrad - BBC £9.95.

Atari - Spect - Electron SOON



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SPECTRUM

Abstract: The purpose of this study was to determine the effect of a 12-week training program on the physical fitness of 10-year-old children. The study was conducted in a primary school in the city of Ankara, Turkey. The study group consisted of 20 children (10 boys and 10 girls) who were randomly selected from the school. The children were divided into two groups: a control group and an experimental group. The control group did not participate in any physical activity program, while the experimental group participated in a 12-week training program. The physical fitness of the children was measured at the beginning and at the end of the 12-week period. The measurements included heart rate, blood pressure, and body mass index. The results of the study showed that the experimental group had significantly higher heart rates and blood pressures at the end of the 12-week period compared to the control group. The body mass index of the children in the experimental group also increased significantly. These findings suggest that a 12-week training program can improve the physical fitness of 10-year-old children.

REGULARS

 Journal of Management Inquiry 22(1)

500

Abstract

Figure 1

1000

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SPECIAL FEATURES

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GOVERNMENT

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- Our reviewer almost the Grand Master
- How well surviving for the ultimate Trial

Editor: Dave Collins
Assistant Editor: Bryce Ralph
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Circulation Editor: Wendy Palmer
Design: Tony Kemp
Production Assistant: Lynn Collins
Ad Manager: Jennifer Parfitt
Creative Advertising: David Morris
Publisher/Chairman: Peter Wallbank

© 2004 Blackwell Publishing Ltd *Journal of Internal Medicine* 255: 103–110

Also: J. Charles Simpson, Lexington 1878-1948. (B) 407.6429

© 2004 Blackwell Publishing Ltd, *Journal of Internal Medicine* 255: 105–112

BASIC LIVING

GEORGE MOORE, A PROGRAM FOR HIS 10TH BIRTHDAY, OF THE TRUCK CLUB (MOTHER)



I EXPECT A MAJOR
WORKING SETBACK ON
NAMES & ALLEGES,
THAT IS TALKING
THROUGH A BUSH IN
THE PROGRAM.



UP NEXT: DIDN'T REPORT OUT THE TRUTH
AS I WAS TOLD. DON'T HAVE ANY MORE QUESTIONS

100% 100%





Adventure
INTERNATIONAL (U.K.)

ROBIN the rich

There's games worth up to £995 for the hundred winners of our Robin of Sherwood competition — so get out your bow and have a go

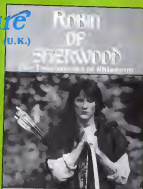
There will be another hundred winners at the end of this week's competition as Adventure International send Robin of Sherwood to our lucky winners.

The game is a real delight, and so the truly successful you should also a fairly green bow while playing the game.

Scarcely did you enter the dungeon where Robin and Much the Miller's son start the adventure after killing a dozen on Guy of Gisborne's estate. You had to get yourself out of the predicament and then extract further instructions from Hame to help you on your merry way.

Regular users of the information series will recognise the main characters and locations of the game, which has been converted for the domestic screen by Mike Woodroffe and Brian Howarth. What is well known in adventure circles after missing the Mysterious Adventure series and, for later bibliography, Guinness Edition is Mike's last adventure which our adventure, Peter Swaney believe will go straight into the top three.

There are versions of the game for C64, Amstrad and Spectrum owners which have full colour graphics and over 150 locations. The C64 and Spectrum versions have a two only adventure. Whatever your machine, you will have hours of



© 1985 C.I. Ltd. Published by C.I. Ltd. The American edition is by Spectrum Computers

An Adventure by
Mike Woodroffe and
Brian Howarth

**SPECTRUM 48K
WITH GRAPHICS
Cassette £5.95**



magical and intense fun wandering about the highways and byways of the Sherwood area.

Adventure International are well respected company who earned by exporting the world famous Nash Adams Adventure series. Their excellent selling skill and connections are currently being proved by Spectrum, C64 and Amstrad

machines, which will be sold as two packs for just £9.95. I suspect that regular dungeon fiction will find a hard to wait!

So it's time to put on your Lincoln green and hide amongst the undergrowth while you fit in your entry coupon — it won't help you win but it gets the neighbours something to talk about.



Cartoon A



Cartoon B

How to enter

- Study the two cartoons — there are a number of differences between them. Circle the differences on cartoon B and seal the cartoon and coupon in an envelope. Write clearly the number of differences you found on the back of the envelope.
- Post your entry to Robin of Sherwood Competition, Home Computing Weekly, No 1 Gutter Square, London W18 3AB. Entries close at first post on Friday 18 October 1983.
- You may only send one entry to the competition, but each entry must be in an official coupon — not a copy — and sealed in a separate envelope.

- **Important:** please follow carefully the guidelines on entering — incomplete coupons and entries in envelopes with no symbols on the back cannot be considered. If you are a winner, the coupon will be sent to a label to send your prize, so clear writing is essential.

The rules

- Entries will not be accepted from members of Adelphi International, except Benjamin Fildesman and Andrew Pearson & Sons. The winners also agree to endorse a feature and sports of the computer in this place in their future home page of the rules.
- The winner's decision is final and no correspondence can be entered into.

Robin of Sherwood Competition

Entry Coupon

Name _____

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Number of differences found _____

Give / do not wish my name to be put on a mailing list _____

Insert Spectrum / C&A / Amstrad / BBC / Electron

Complete clearly, carefully. If you are a winner the coupon will become your address label. Post to: Robin of Sherwood Competition, Home Computing Weekly, No 1 Gutter Square, London W18 3AB. Closing date: 18 October 1983. Entries will remain open until the winner is announced on the night of 18 October.

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TRUST

RUMBELOW'S

Pick a package or two

1984 may well be remembered as the boom computer industry as the Year of the Bundle and Toshiba and Ken's have announced their Christmas business bundles of hardware, software and peripherals.

Toshiba: Aimed at the first-time buyer, the Toshiba HX-10 kit includes the HX-C810 data recorder, a step-by-step guide to HX-10 computing, three software packages (Teach Yourself

and among its older machines and will be vying with Toshiba and the other major manufacturers in the Christmas computer package stakes.

The HX-10, 64K, machine is now available with a joystick and game cartridge at a price of £70 or with a data recorder, joystick and software pack at a price of £99.99.

Launched in May of this year the HX-10, a 128K computer is now available as part of two packages. With a disc drive and four pieces of software it will cost £215.99 but with a 1027 letter-quality printer and word processing software plus three more pieces of software it costs £300.

Both packages come with a programming book. On its own (you will, can buy computers on their own) the HX-10 is priced at £140.

With bundling fever gathering pace at the run-up to Xmas there is no doubt there will be some bargains to be had but just make sure that somewhere amid the mountains of boxes

some there actually is a computer at the bottom of your stocking.

Toshiba, Toshiba Max, Primley St, Camberley Surrey

Alert, Alert Via, Railway Avenue, Slough, Berkshire



Ken's HX-10: Would it be a bundle of business at Xmas?



Toshiba's HX-90: 900 key board

Basic, Checkmate and Break Out), a Mark C10 cassette and last but not least two extra plugs and a recorder. By bundling of course the HX-10 computer itself. The whole package costs £139.99 and will be available at the end of September. The HX-10 on its own will cost £209.99.

Toshiba are also offering a music package that will include the HX-M8/90 keyboard capable of 9 simultaneous notes, 48 different voices and 20 different rhythm patterns. The keyboard alone costs £179.99 and is available from October but a package with the HX-10, a personal book, and keyboard interface will sell for £189.99.

Old computers never die it seems they just get bundled and the HX-10 has indeed made it easy for the HX-10, a 128K machine with 10K RAM and 64K ROM that is priced at £249.99.

A Toshiba spokesman told PCW that educational and business packages are in the pipeline.

Alert: With the launch of the 308T, Ken's has found itself with plenty of bundling power.



Nowhere in this box is a computer



Super Programmer

This book is subtitled, "Professional Programming of ANSI Standard BASIC," which sums up the book's contents fairly well. Written by Alan M. Gordon, the book explains to the reader the principles behind, and advantages of, ANSI BASIC over other versions.

This type of BASIC is found on the Esacriptor computer from which the book was derived. The approved logic of Esacriptor themselves, suggests it is suitable for those Esacriptor users struggling to get to grips with the rather different BASIC.

What is ANSI BASIC? Well it is a heavily structured BASIC allowing procedures, DO loops, and a number of other relatively different commands. Alan Gordon's book takes you through the BASIC carefully but also provides many valuable suggestions to programmers using any BASIC, whether it be well or poorly structured.

What makes this book particularly readable, is the author's style and examples. He points out the devil of proving programs which are written almost entirely heads on, while reminding the value of structuring, pre-testing, flowcharting and careful error correction. Although the approach lacks anything new, for few people (myself included) use these principles when they embark on program design and writing — and it is useful for reference.

The program examples are fairly useful; a variety of sorts are included and there is a handy appendix entitled, "An excursion into Binary." All in all, a worthwhile serious programming book for ANSI BASIC users. **C.G.**

Price £5.95

Publisher Sigma Press

Address: 1 Alton Rd, Wilmslow, Cheshire SK9 5DY



Advanced Z80 machine code programming

Are you the type of computer enthusiast who has just tickled his first "introduction to the Z80" type book and yearned relatively unobscured? If so, having mastered the basics of Z80 assembly language you may be wondering where you can learn more. One book recently noticed and aimed at filling this gap in the market — "Advanced Z80 Machine Code Programming" by William Henkel — could be just what you are looking for.

The program are written using a fairly HELLish computer, (remember closely as it is essential that the users are very familiar with the complete memory map of these particular computers).

The first chapter discusses that old classic of programming, Sorts. So you may get away with writing BASIC programs whilst sitting at the keyboard. But when it comes to assembly language programming it is absolutely essential that you decide exactly what you want the program to do and how it is to be done before you begin coding.

The remainder of the book is dedicated to writing a series of subroutines and short programs. These include string manipulation, arrays, data comparison, raster graphics, and adventure games. Finally there are programs given for using commercial software and how to tackle the many problems associated with the marketing of your product.

The book is a very competent piece of text but it cannot over-emphasize the importance of knowing your machine inside out. Without this knowledge the book will be of little use. **I.R.**

Price £12.95

Publisher: Interface Publications

Address: 1-11 Rivington Way, London W10 3NP

Marking: Z80 based micro

Rating: 3 out of 5



Coffins And Kingdoms

The back cover of the book calls it "one of the most dramatic and mind-stretching adventure offerings of our time." Does it live up to this claim? What is it for your Z80-based adventures, all with Esacriptor and Dragon-style computers. The authors are American and the plots dull.

Proceeding each adventure is an interesting short story. The game descriptions are pretty simple, with brief text and a small vocabulary. Players accustomed to full computer input and complex problems will be disappointed, and, all rooms, those are no graphics. Some games are better than others, my favorite was the longest, Finders.

Using them will take ages, and this is the book's greatest fault. Each time you find a type in certain rooms, like the parrot and movement. Decide — which way slightly from game to game — but could at all of them. This is a wonderful use of the book form, because it involves entering the same thing 15 times. It would be more useful to put an adventure "tree" at the beginning, then supply 15 sets of data for it, which would enable the player to design his own games. It would also have been a good idea to include real clues in the stories.

If you really want these adventures, instead of buying the book send your name, address and a cheque for £3.50 to Virgin for a tape version. It's cheaper — and just as good. **P.A.**

Price £3.99

Publisher Virgin Books

Address: 333 Kensal Rd., London W10 3XJ

Author: Bob Liddell

C64



ENTERPRISE



All the releases under the sun and some from space too in this week's round up of software from around the galaxy

RELEASES



Gifts and pleasures

• Carious capers this week as two cherished favourites set out to fill the home screen. **The Flintstones** and **Snooky Bino** both from the Hanna-Barbera outfit have been snapped up by Commodore and CIB. *Flint* and *Snooky* will be the first of the Flintstone family will be appearing in Quackdick's game scheduled for release on November 18th. The archaic actor forges Fred as he goes in to build a house in a desolate quarry in the suburbs of Bedrock. It is renowned that the first game in which is designed to be a Flintstone series does not include the legendary Barney Rubble.

• *Eliza* have **Snooky Bino** in the **Castle Mystery**, set for release at the end of October. It is described as "The first ever computer cartoon" and *Snooky Bino* and *Snooky* the look of mischief has the mystique of Mickey Mouse. The prolific game whizzers speech bubbles for communication were inspired by Eliza's sales manager, Steve Wilcox, who said, "The best computer we can draw, is with text; disc games, the players role is very much to the director of an interactive cartoon."

• *Eliza* who have toward other cartoon characters as their domain the future release, will bring out **Snooky Bino** for Spectrum, C64 and Amstrad at £9.95, £7.95 and £8.95, and at £11.95 and £12.95 for C64 and Amstrad respectively.

• **Horizon Computers**' **South-**

ern Belle, the classic stage production which has become a staple hit on the Southern is scheduled for release on Amstrad on October 18th and further conversions are planned for the near future.

• The role playing adventure **The Way of the Tiger** are to be removed for the home market by Gamescape. The series written by Mark Smith and James Thompson are based on the adventures of the **Avenger**, a Ninja warrior who uses his mysterious powers as defense of the weak in the battle against the forces of evil. The computer games which have been written as collaborator with the authors presents plenty of gameplay and entertainment. The first of the series to be available in February 1985 will be for Spectrum, C64 and Amstrad.

• Ian Stewart, marketing Director of **Orion** Computers, said, "There's a lot of hard work ahead combining the talents of specialists from many fields — the arts and the sciences — but we are all geared up to a project that we are confident is going to set the standard for a long time to come."

• Tynesoft are entering the sports simulation field with **Winter Olympics** featuring downhill skiing, ski jump, two-man bobs, speed skating and curling slams. Available in October for the C64/plus 4. **Winter Sports** costs £5.95.

Cheek it up!

Chalktalk, the leading board software house has announced five new titles to be released in October for the C64. **Cometville** is a female lampoon on contemporary domesticity, sitcom, movies, etc and costs £17.95. **Number Five** is a five program audio production center (eg. major movies, radio, television and evening club). Available only on disc it costs £14.95. **Statopark** is a program aimed at those forming a statistic club or otherwise and costs at £17.95.

In a different vein is **Yes December**, a simulation of the British economy. Can you save the country after all the rocks? Instead of having double parties or forecasting disaster you confront the forces of inflation and the national debt. The program is written by a former credit officer of the Bank of England and the first disc costs £7.95.

Reptiles Quiz is a general knowledge contest with a difference as the world can only be saved from nuclear war if you get these answers right. There is a *Reptiles* to make up and as these your own questions and the answers are available for £10.95. A Spectrum version is also available for £9.95.

Second home for Henry

If it moves, maybe it comes to the school of thought in the software industry, at the moment and **English Publishers** are the latest to try to give the competition work.

Two titles entitled **Henry's House** and **Friends**, **Volume 1** and **2** will be available from October 2nd for C64/128 price £12.95.

Volume One contains **Henry's House**, **Joe-Joe Jack**, **Stranded** and **Myra's Dilemma**. The second package includes the previously mentioned **Soldier of Fortune**, **Witch Switch**, **Legend of the Enchanted Hole** and **Henry's House**.

Also released on October 2nd is **Tigger the 4-Copier**, an arcade game for C64/128 priced £1.95 and £12.95. **The Game** is a wheel-based fantasy sports action suspense and Tigger the Copier is out to find the colour.

Booth under slaps

Microsoft's 1987 booth at the COMDEX '87 computer show in Las Vegas, NV, was a disaster. The booth was a mess, with no clear signage, no staff, and no products. The booth was a complete failure, and Microsoft's reputation was damaged. The booth was a complete failure, and Microsoft's reputation was damaged.

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Ministers and moles

Minis has secured the rights to the BBC comedy series *Yes Minister* and the game, now programmed by the Radio Jam Corporation, will be available in November. In this series, the name of the character is given, and the character is given a name. The character is given a name, and the character is given a name.

Minis are also releasing the novel *Henry of Adams* and the novel *Henry of Adams*. The novel is a comedy, and the novel is a comedy. The novel is a comedy, and the novel is a comedy.



SOFTWARE



Boulder Dash

Climb Rockwell through a series of more different caves collecting gems as you go. Almost as old before! Don't you believe it. Monomaniacs have taken this well worn theme and turned it into a new fire monster called 'Boulder Dash'.

Rockwell is a little beetle-type character who instead of arms, these contain a mixture of sand and boulders. Rockwell can bury quite deeply through the sand, leaving a tunnel as he goes. Burying under a boulder causes it to fall into the newly formed tunnel. If the boulder had been at the bottom of a large pile of rocks then the chances are that our little beetle would cause a landslide.

Be sure you should be beginning to get the idea that all is not as straightforward as you may have imagined.

There are a few number of jewels present on each screen. These must all be collected before you can exit to the next screen. Quite often the jewels will be so close proximity to a poisonous looking pile of rocks. Now in retrospect there, or even worse there is fall in the opposite direction, is the distance of the game.

The rocks all fall in accordance with set laws, the collapse of a massive pile of boulders is a joy to watch. Another example of the attention to detail is the impression of the hero. Borealis the miner (who is served at two and he stands there, breathes out, tapping his foot).

This game has received a higher accolade than any HGV rating, my wife is crazy about it.

J.R.

Peter D955

Publisher: Minerva Ltd

Address: Mirror Group Newspapers Ltd, (Hobson Circus, London EC1P 1HQ)

AMSTRAD



Sorcery+

Heck up all of you who thought that Sorcery was going to be the number one game of 1985. Well you're all wrong because it has just been ousted from that position and shot by another program, Sorcery+!

The evil Monomaniac, Boz Thru has imprisoned nine of your fellow mortals in his evil castle, you must rescue them.

To describe Sorcery as an arcade adventure is nothing short of criminal. When compared to Sorcery's graphics every other game pales into insignificance. Sorcery's plot is better still.

The first thing I should tell you is that Sorcery plot is only available on disc. It won't be released on tape as it takes more things (known as tape) to make this new version much larger than before. As you move between rooms the door opens for a fraction of a second as new data is loaded into the computer.

There are now 40 screens to navigate whilst searching for the sorcerers, who randomly are in new locations. Having completed the monomaniac task you must then score a further 27 screens in search of the monomaniac himself!

Some of the new locations are even more breathtaking than the original. There is also a new set of boulders, an excellent dance mode, and the facility to save your high score for posterity should you get awfully ill at some point.

You may have thought Sorcery was good, but Sorcery+ is the best. I also think of for buying a disc drive.

J.R.

Peter D955

Publisher: A/Signs

Address: 1 George St, Sheffield S1 4JH

AMSTRAD



Dig-Dug

Poor detailed graphics and average sound effects label this as another US Gold release of what is a relatively aged game.

Under joystick control, one or two players control a "miner" whose task is to burrow underground destroying monsters which burk in small caves — his only weapon being a "bicycle pump". That's what it seems like, anyway. Several phases of this and the monster's inflate and explode. The miner can also raised under rocks and drop them on the monsters for extra points, although this is particularly hazardous.

Physical contact with most things is "falling rocks" or "monster" means death if left alone for long enough, the latter undertake a spiritual transformation and can move through the solid earth, other events the miner is up to the surface. It was difficult to score the actual objective of the game as the review tape appeared to malfunction — it appeared, however, that monster catching the surface caused the loss of a life.

Destruction of all the monsters leads to a further medal, but faster, scores — there being twelve in all!

Overall, this is a poor offering by a company renowned for a supposedly rigorous, if not always satisfactory, game. The standard of graphics was the poorest I'd seen in any Amn programme for some time, and the effectiveness of graphics — there wasn't any! — didn't help to reduce the impact of poor presentation.

Not a purchase to be recommended except to the fanatic arcade game.

G.C.

Peter D955

(D9 65 disc)

Publisher: US Gold Ltd

Address: Unit 18, Parkway Ind Centre, Birmingham B7 4LY

ATARI





The French Mistress: Level II

OK, I confess, I only studied German at school and failed that! Why bother therefore, to test a vocabulary training program? If it works on me, it'll work on anyone! Whereas level A concentrates on words linked to situations, level B deals with idioms, phrases, tools, customs, and medical terms, then focuses into parts of speech, including verbs in every tense.

The tape drives into a contextual program, and then containing a series of words. Feeling distinctly pro, I loaded it in together with the colour disc. A screen then presents itself from which you can choose to load/tape a section of words, structure one yourself, correct the lesson, or test your progress.

Deciding on the lesson the screen closes to reveal, and you can choose whether English or French appears first, and how long a delay to appear. Then, in glossary-like list, masculine words are printed as opposed to ensure the feminine ones! They can be set to repeat until they sink in your head. Mind I'm used, but the colours used aren't entirely successful on the green screen.

The test screen allows choice of English/French or French/English translation, and, after the prompt, any wrong key press in your answer are beeping. If you're struggling, the only hint offers some help in the shape of the next letter.

No French problem or sound, just plain 'well error trapped BASIC, well Ouf', it works. I bet you're not with error!

BM

Price: £19.95
(£10.95 disc)

Publisher: Koonce

Address: 1 Pilgrims Close, Haringey, Beds LU9 6LN

AMSTRAD



Monty on the Run

Monty has escaped from prison, and you must guide him through 48 screens of hideouts and secret passages. There is a visual environment of moving snakes, traps, and flying alarm clocks to shoot, which are extremely difficult to avoid even though Monty is able to camouflage. A number of state objects are filled around, some kill Monty on touch, others are helpful and gold coins can be collected which boost your score.

A 5 star lesson can be selected at the start, however if you meet an obstruction which can only be passed by using an item you've left behind you must abort the game and restart!

The puzzles left the game above the norm, for example, to raise the bridge works Monty must walk onto a snake and have a particular item from the freedom to go some screens then are vertical rays which, if touched, transport Monty to another screen, but it's sometimes possible to pass through — a major problem is knowing which object Monty has encountered or is carrying, has caused a group effort, particularly since he must always carry 5 items from the lot.

The hints are well chosen, alternatively Kampania or similar joystick maintains can be used.

Monty on the Run is an exceptionally difficult platform-type game, requiring both arcade-type dexterity and some problem solving. Ideal if you enjoy a challenge, although it seems over-rated. **5.5E**

Price: £15.95

Publisher: Gemini Graphics

Address: Alpha House, 10 Curver Street, Sheffield S1 4PF

SPECTRUM

Price

Computer Studies

S

For Schools GCSE, OSE and AISE

Computer Studies



Computer Studies

This suite of 30 programmes, on two cassettes, is aimed at providing a comprehensive revision aid for the G.C.S.E., C.S.E. and G.C.S.E. courses of study. An explanatory teacher's booklet and the in clear and concise, up-to-date notes for the programme.

The subjects covered are the history of computers, data and information processing, computer systems, computer hardware, operating systems, data organisation, file systems, high-level languages, low-level languages, logic circuits and numbering systems (Powers of 2).

I felt that the first five tracks laid above were, from the educationalist's point of view, weak, since they rely on the two techniques of multiple-choice and fill in the gaps rather than to diagnose. In my view, being given a choice of answers, forces the student to employ the multiple-choice and fill in the gaps approach until the correct answer appears and this promotes to little cerebral activity than the answer is unlikely to be stored in the memory for long. The "fill in the blanks" type technique is a better approach, since it does require a minimum of comprehension to arrive at the correct answer. However, the interpretation of human input is so inflexible, that this rapidly becomes the game the computer's mind would comprehend.

However, having made those

criticisms, the final five tracks take a major leap up the educational ladder by comparison. They are interactive and answers can only be entered as by a series of logical thought processes and true comprehension of the topic. The high-level language track is particularly useful, it presents short segments of programs in both Basic and you are asked to state the value of a particular variable after program execution. Only a full understanding of operator assignment priorities would allow you to compute the correct value and if you get it wrong, the computer doesn't start line by line, with the aid of a trace table how to arrive at the solution. The examples cover the major programming areas of sequences and assignment, branches and loops, subroutines and functions and finally, arrays.

A version of CIMA (Computer Instructional Materials) is provided, to give access to low-level languages. This again is most useful and also provides a trace facility to show program flow and regular updates at each step. The coverage of flowcharts, logic circuits and numbering systems is good and without going into too much detail, they are both probing and instructional.

I feel that the main disadvantages of the earlier tracks are outweighed by the overall performance of the package and that it would be a beneficial adjunct to any 'mainstream' formal study course. **M.B.**

Price: £11.95

Publisher: Charles Letts & Co. Ltd

Address: Dairy Rise, Barnaby Rd, London SE10 5DW

BBC

ELECTRON



London **Pratt**

The company that brought us Automated Grip Poker has now greatly taken its attention to other fun topics and award competitions—golfing, soccer, Lucky Franks (are you probably surprised to find a local machine game featuring nudes, birds, rivers, boats and mystery eggs as well as gaudy flowers). It is claimed to be very much like the real thing and no drawing the numbers I had to guess.

The instructions are clear but I noticed a number of spelling errors. If nothing comes, such as "achieved" and "bare" (instead of "advised" and "saw") get through then our wonders how well the program has been once checked!

Placing the front switches is particularly nice in making use of the dual graphic screen. The scrolling is precise and assigning each up and down does not always give the results that I thought I did like the Combit feature which is just like standard I have thrown away once on my previous work.

The program is written in BASIC and, while there's no harm in that, the actual execution is not the best that could be achieved in that language (you can look at the various ways of winning by pressing the 'H' key, but one drawback to the animal from machine screen feed that you suddenly have extra birds on the three birds).

The whole program smacks of a rush to get a published rather than a careful programming and debugging process. There are better free machine simulations on the market and I would not recommend this one. C-A

1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 2627, 2628, 2629, 2630, 2631, 2632, 2633, 2634, 2635, 2636, 2637, 2638, 2639, 2640, 2641, 2642, 2643, 2644, 2645, 2646, 2647, 2648, 2649, 2650, 2651, 2652, 2653, 2654, 2655, 2656, 2657, 2658, 2659, 2660, 2661, 2662, 2663, 2664, 2665, 2666, 2667, 2668, 2669, 2670, 2671, 2672, 2673, 2674, 2675, 2676, 2677, 2678, 2679, 26

Address: Unit 111, Glenfield
P.O. Box 111, Glenfield, N.S.W.
Phone: 089 41 1111



444

One of the best features of **LatentNet** **WAPAC** is the ease with which it can be added to **Maple**. **Practical Utilities** take **WAPAC** and **WAPAC** but give all users 31 new commands for more advanced

They did one more outrageous thing, starting with FPL and CIRCLE — the latter is quite free and can also draw ellipses. Also CPDS which changes the colour of the mouse's ink easily.

There are many ways to use the wealth of resources at the operating system that you won't know about unless you have the *Responsive guide*. Click on and off, wait for a keyboard, read a character from the screen, flash the keyboard buffer, stream print, compare, compare motion on and off, read the screen to default colors and so on.

Finally, some motion and graphic commands, screen, video and variable, a means of allowing your program to be unattended if you wish it, super fast save speeds, its counts up to 4096 baud, double peak and pile, ROM port, memory disk, and screen lock, left, right, up and down.

They all work very well, and it's good to see the founder owner using some of the new commands. Very impressive, but not to find it protected to some can't see how they did it. It can be broken into many steps you know the secret, but it's not in the 5 page manual which accompanies the package. So we find spelling errors. Even **MailC** requires perfect spelling of commands! **D.H.**



1. *Introduction*

Address: 20 Chancery Lane, Singapore 109322
Telephone: +65 434 3838, Fax: +65 434 3839



1000

Then doesn't *'em up* game actually *has* a plot, rather than the usual complaint: "If there are coming, you destroy them before they destroy you?" Although, it is a moot point as to whether *'em up* applies to space — perhaps there's something about arbitrary time, might be more appropriate for these dimensions.

Your task is to locate animals, using the radar at the top of the screen and spray them with bullets, so that they release crystals (a lot of money appears). Collecting crystals gives you starbursts to use against the evil Dinosaur laser.

However, there is a stipulation for the crystals from the Deather's worker staff. They have about the methods collecting any crystals that remain and transporting them back to base, in bulk the Deather pass by pass (2 transported crystals complete the Deather). The same constraint is made that

difficult by the presence of Warrior craft, so one has to spare the warriors for a while to dispatch the warriors before they close in for the kill.

When the Dendrotheria became complained, the several flutists used the strongly star-shaped, especially somewhat, very thin, pointed tips on the radius. The first play here, appears to be to use the first, releasing the flutist as you go and these flutists at the first, blowing about a lot of air. I just said, all flutists before this star was introduced to replace and it changed me. My disagreement was not particularly convincing. It was symmetrical, with a line that starts. I've always held it that you should go out on a line of glory, but they left them. There was merely a place, but as the women at the center.

The plot is original and use of graphics and sound is good and the levels of programming are provided for the video viewer. Lots Overall it's probably not a chart-buster, but it's a competent piece with more sequencing than some I've seen lately.

Figure 1

Publication	Superficial	Soft tissue
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Address: Dept. C, Rogers Hse.,
Riverside Lab., Leeds LS7 1AX





Macadam Bumper

This computer title emulates a full scale simulation of a pin-ball machine, and I promised myself when I started to load it, how boring! I was wrong.

While I graphics are good, and the resultant scenes feature a fluidly drawn, and visually steady table to the right, while on the left, the "back" of the machine, with all its scoring possibilities together with an occasionally outrageous bonus-purses. You have all the features you would expect from a real table, plus the ability to load it at any stage of play — which is "legal" — in order to guide the ball.

Up to four players can control it, and lights flash, bells ring, and music plays in true pin-ball style. The author has clearly accepted authenticity as his primary aim, and as a result, some of them are so small, they're hard to see. What's great, however, is the movement of the ball and flippers. True, there's the odd flicker, but the ball really moves like a ball, and the flippers flip instantly. The whole table responds like the real thing. I was well and truly hooked and played for hours. But there's more!

You also have the facility to redesign the table from scratch, and tailor the response of the bumpers, pickers and flippers. These take it to tape. When you try, you'll realise what skill went into the standard set! Very absorbing fun. Commanders dream to get almost every other major computer version of the game. **D.34.**

Price: £7.95

Publisher: PSC

Address: 452 Spensy Gardens
St. Coventry CV4 2DG

**AMSTRAD
SPECTRUM**



The Pop-off

From the surprisingly named Japanese Software comes the original adventure, licensed from Atari — originally called New Jersey Street. I think I like the more subtle suggest of a quiet occasion, the one it set as the early underworld of New Jersey. Damon Brown's story.

It's a world of gambling, two-bit hotels and a dim-lit barry called Looz who have to pay off — all you have to help you is a \$50 bill, a crumpled note in your pocket and your wit. You'll certainly need these — despite the adventure's limited scope. There are enough tricks and logical puzzles to keep you amused and entertained for some time. Let's just say that you need to find some people looking in a safety deposit box and exchange them for a briefcase which leads to a Looz, before his head inside finds to keep you out of control.

The whole adventure is refreshing — the writing is fun, there are a fair number of humorous responses and the wit of the programmer do get increasingly obvious at times. For example, after opening a long time usually prior to the result (just the words) and with the right twist you might well be inclined to do it the time back — just remember that these guys enjoy screw you out and think about what more before you do it. And that means thinking it through after you've come so with a solution to the original puzzle.

The adventure is certainly only available for the BBC on disc or cassette, but as it is a version is also on tape. There are no flashy graphics here, just simple text, but I think that might well appeal to people who aren't easily advised over. Now, if I could only work out why they're called themselves Japanese Software! **D.R.**

Price: £3.95
(£7.95 disc)
Publisher: Japanese Software
Address: 230 The Square, London, E16

BBC



Wizard's Lair

A dual tape, Amstrad on one side, C64 on the other, featuring an adventure which, surprisingly, deals with a simulated loading screen.

Once loaded, you find yourself in the controller of Proteus Pete in a seven level cave system inhabited by the Wizard and sandy monsters, knights, swordsmen and so on. Your aim is to acquire spells, and the gold to make them work, weapons, and things — you may even become invincible — on your quest to acquire the four pieces of the golden lion, and then escape. Your only other protection is throwing axes at the phobos. Sound familiar?

Made it with its higher resolution, but limited range of colours, is employed, and the screen is well decorated with doors, secret passages, windows, etc. You view from above, with a non too successful attempt to give a 3-D impression using angled right and left-hand walls. Sound familiar? Pete and his assistants move very smoothly, but aren't animated in the true sense of the word. The whole is accompanied by sound effects, and starts-to-end screen rate to monitor, but slightly disappointed.

Though not technically state-of-the-art, it's pretty good. I find it hard, therefore, is understood why Battle Box should spend the time, and the cash, to do what is, in effect, a version of Air Asia. The only thing the rating does.

If you really want the type of challenge that Wizard's Lair, but don't expect anything new and stunning from it. **D.34.**

Price: £9.95

Publisher: Battle Box

Address: 47 High St, Tonbridge
Kent, TN10 1RX

AMSTRAD



Starion

If you thought that Starion was a good shoot-'em-up by Thompson out of Essex, then read on.

The control panel lies in front of you, comprising head up display of status, velocity, fuel temperature, lives, points/score indicator on. Through the cockpit window a huge variety of enemy ships wave, probing their weakness in the atmosphere motion yet seen. Not a flicker. Drawn in wire-frame, 1-40, vector graphics, they have real depth as they attack, and if all you had to do was blow them via keyboard or joystick, this would be an excellent, if unrealistic, game.

It isn't, however. As you down each ship, at a rate, in the form of a letter, must be loaded. On the top of your time sector, the on-board computer tells you to rearrange the letters to spell something other than the Earth by the stars. You must then select the year in which it before, wrap through time, and land on the planet — avoiding alien ships as you go — then reacting before the 4-sec, you become a Christening, but to become Christ, 300 stars must be unscrambled. Land in the wrong year, a clue will help you are what went wrong, and you must battle again to score another 300, a rare measure of arcade and intellectual challenge. Super!

Have the trouble on me. It's in front in 1988, and Starion in 1990, but will surely please all the what HOMEWARD made for and where it belongs! I'm going home! **D.34.**

Price: £9.95

Publisher: Melbourne Hec

Address: Castle Y6, Richmond
TW9 3DP

AMSTRAD

RON COMPLEX



Ron Complex special investigator gets deeper into troubled water and no one will throw him a line in this weeks instalment of our mega-mystery (or was that misery) serial

A match spluttered on a table Ron held a cup but there was no sign of Lieutenant Pythagoras in the interrogation room. "Come on that match," said a voice from under the table.

The Lieutenant stood up and grabbed the match. "I know what you're thinking, Complex," said the Lieutenant, "but let's get one thing straight — it's not the dark, I'm afraid of, I just like being under the table once in a while."

"Good Lieutenant," said Ron as he awkwardly fumbled with a light bulb. "It's quite natural."

The lamp came on again. "Right now, where were we?"

"You were threatening me with some really difficult algebra problems," said Ron, "but before you threaten me some more, what's happened to my own police call?"

"Oh yeah, it completely slipped my mind," smiled the lieutenant, throwing a careless glance under Ron's nose.

Ron dialed slowly, pausing between each digit — just to get under the Lieutenant's skin.

"Hello Murko," said Ron, "hello, I need you to find me out, I'm being held at the

downtown slammer as a bookie and crying rap."

Murko was desperately searching for his pennoch beneath the bathroom. "Complex, you always phone at inappropriate moments. I was just relaxing in the bath and about to get onto the final level of Charles Day 27 when you called and now the police's lot in the end."

"Murko, you bastard me I'm a trouble here and all you can think about is a game."

"If you've been caught doing something that's shady, Complex, I don't know you for free, I have never known you. The conversation never took place. Sorry, wrong number."

Ron finished as the receiver was slammed down. Murko slipped a switch on his turbo charged post-a-bath and made a quick circuit of the house wires. He was a happy man. As he turned a corner water slopped over the rim of the bath onto the plush carpet.

Murko grabbed a bottle of champagne to be wary just the drinks cabinet and came to a halt by the window, where he peered up one of the 10 ceiling phones strung around the room.

Meanwhile, Ron was talking, but was being real about it. The words "I've been framed," flashed like bright neon across his mind's eye.

The phone rang. Lieutenant Pythagoras picked it up and listened. "Well thank you sir. We always appreciate any help we can get from honest citizens to help us carry out our job, and thank you for your comments. I look forward to receiving the Mr Lawrence Super Plus Deluxe Hypnotic Cakes."

Ron felt totally alone — Ron was totally alone. He lay down head on a cushion, imagining it was Murko's table. Why had he been deflected just to be set up by the man who framed him now? It didn't make sense.

Ron struggle to hear a waitress placing Mints and Flowers out of key somewhere in the building. He still had enough grip on reality to know it was his imagination.

"Never mind the police," said Lieutenant Pythagoras, "let's get your statement onto the computer. The location pointed the keyboard of his computer and turned heavily as the screen."

"That's odd," he said, "I can't get into the room." Across the screen, changing every second, were totally unconnected words — mammals, tomato sauce, one telephone, trip wire.

Next week — The end or great escape

IT'S A GAME

It's time to get logical as David Ellis has you searching your Amstrad's manual in this week's game writing article

Hidden away in the depths of the User Manual (Chapter 9) Page 16 are some very useful control code commands that you may not have come across before. Two of these are the codes 22 and 23. They control the way that Text and Graphics are printed to the screen.

The first of these, code 22, controls the way that Text is printed to the screen. The normal mode (opaque) is set by

```
PRINT CHR$(22)+CHR$(0)
```

In this mode, any text sent to the screen will overwrite whatever is on the screen at that printing position. The transparent mode option is set by

```
PRINT CHR$(22)+CHR$(1)
```

Any text sent to the screen now will "mix" with whatever text is at that position. Try the following:

```
10 PRINT CHR$(22)+CHR$(1)
20 LOCATE 10,PRINT
  "AMSTRAD CPC844"
30 LOCATE 10,PRINT
```

If you RUN the program you will see that "AMSTRAD CPC 444" will be underlined. Change line 10 to CHR\$(22) instead of CHR\$(1) and RUN the program again, you should be able to appreciate the difference between the opaque and transparent modes.

The transparent mode is useful in that characters can be made up by overprinting at the same position on the screen. The following program will overprint four graphics characters to produce some squares:

```
10 PRINT CHR$(22)+CHR$(0)
20 FOR x=100 TO 300
30 LOCATE 10,0
40 PRINT STR$(x/20),x
50 NEXT
```

```
100 MODE SCREEN 1:SCREEN 0
110 PRINT CHR$(22)+CHR$(0)
120 '
130 FOR x=100 TO 300 STEP 2
140 FOR y=100 TO 300,x
150 :DRAW 40,0,1
160 :NEXT
170 '
180 FOR x=220 TO 420 STEP 4
190 :DRAWIN x,220
200 :DRAW 0,-40,2
210 :NEXT
```

CROSS BLOCKS

What if you want to use the transparent mode when printing at the graphics cursor when using TAG? Try changing line 20 to

```
10 TAG:ORIGIN 100,200
```

If you RUN the program you

will see that it does not work. Try changing line 10 to

```
10 PRINT CHR$(22)+CHR$(0)
```

and RUN the program again. The text it works OK. What's the secret?

```
100 MODE SCREEN 1:SCREEN 0:PAPER 0
110 g000=CHR$(22)+CHR$(0)
120 g004=CHR$(22)+CHR$(1)
130 g008=CHR$(22)+CHR$(2)
140 g00C=CHR$(22)+CHR$(2)
150 opaque=CHR$(22)+CHR$(0)
160 transparent=CHR$(22)+CHR$(1)
170 t=""...TEXT transparent"
180 op=""...TEXT opaque...."
190 a0="...graphics 000..."
200 a4="...graphics 004..."
210 a8="...graphics 008..."
220 aC="...graphics 00C..."
230 WINDOW #1,17,24,6,22
240 PAPER #1,3:CLS #1
250 PRINT g000;:TAG:ORIGIN 55,300
260 PRINT a0;a0;:TAGOFF
270 PRINT g008;:TAG:ORIGIN 55,250
280 PRINT a4;a4;:TAGOFF
290 PRINT g00C;:TAG:ORIGIN 55,200
300 PRINT a8;a8;:TAGOFF
310 PRINT g00C;:TAG:ORIGIN 55,150
320 PRINT aC;aC;:TAGOFF
330 PRINT transparent$
340 LOCATE 2,19:PRINT t;a0;a0
350 PRINT opaque$
360 LOCATE 2,21:PRINT op;a0;a0
370 LOCATE 1,1
```

GRAPHICS and TEXT INC 1987/88

To understand we'll have to look at the control code 33. There are four different Graphics Ink Modes. These are:

- CHRG(0) = CHRG(0) — Normal Mode
- CHRG(1) = CHRG(1) — XOR Mode
- CHRG(2) = CHRG(2) — AND Mode
- CHRG(3) = CHRG(3) — OR Mode

The normal mode is similar to the Text display mode, where anything printed (or drawn in this case) overwrites whatever is on the screen. With the other three modes however, logic operations are performed between the PEN number that is to be drawn in, and the PEN number at the position where the drawing will take place on the screen. It is important to note that it is the PEN numbers that are operated on — and the number of the INK that is in the PEN.

You don't really need to understand how OR, AND and XOR work. If you study the chart (XOR, OR, AND) you will see that it is the point of performing the logic operation between two pens. Type out the listing CHRG65 BLOCKS and we'll experiment.

Line 110 sets the normal mode. The two loops draw two blocks of colour which interact each other. A BRIGHT YELLOW (PEN 0) block is drawn first, followed by a BRIGHT CYAN (PEN 3) block. Note how the BRIGHT CYAN overwrites the BRIGHT YELLOW. Now try changing the CHRG(0) to line 100 to CHRG(1). This will now XOR the PENS. RUN the program again. The result is fairly the same, but this time the colour of the intersection is RED (PEN 3). Study the XOR chart and

you will see why. The PEN 0 drawn by line 100 is XOR'd with PEN 0 which is the background. 1 XOR 0 = 1. So the resulting PEN drawn is PEN 1 (BRIGHT YELLOW). Line 100 now draws in PEN 3. PEN 2 is XOR'd with PEN 0 again. 1 XOR 0 = 1. When PEN 2 is XOR'd with PEN 1 at the intersection though, the result is 2 XOR 1 = 3. PEN 3 is RED.

Change line 100 to CHRG(2) to AND the PENS. What do you think the result will be? Well, nothing gets drawn at all. If you refer to the AND chart you will see why. 1 AND 0 = 0. The drawing is therefore done as PEN 0 i.e. the background colour, which is why you can't see the blocks!

Change line 110 to CHRG(3) to see what happens when the colours are OR'd. Look at the OR chart and you will see that the result is the same as when the PENS were XOR'd.

Try changing the PEN number that the drawing takes place in, by altering the line number in lines 140 and 150. Try using pens 7 and 8. You should see that the intersection in XOR and OR mode is set to PEN 15, which is PINK/SKY BLUE.

This may be very interesting, but what use is it?

Change line 100 to CHRG(0) to XOR the PENS and RUN the program. Now run the program again without changing the screen, but from line 110 with RUN 100. The two blocks are erased. Nothing a PEN number by itself will always cause it to be drawn as PEN 0. The result of the XOR mode therefore, is to erase any shape on the screen. All you need to do is to draw it again, in the same PEN number, and it will disappear.

The OR and AND modes are used for making shapes appear

00	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11
12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13
14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14
15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15

00	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11
12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13
14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14
15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15

00	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
0	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	1	1	2	3	4	5	6	7	8	9	10	11	12	13	14
2	2	2	2	3	4	5	6	7	8	9	10	11	12	13	14
3	3	3	3	3	4	5	6	7	8	9	10	11	12	13	14
4	4	4	4	4	4	5	6	7	8	9	10	11	12	13	14
5	5	5	5	5	5	5	6	7	8	9	10	11	12	13	14
6	6	6	6	6	6	6	6	7	8	9	10	11	12	13	14
7	7	7	7	7	7	7	7	7	8	9	10	11	12	13	14
8	8	8	8	8	8	8	8	8	8	9	10	11	12	13	14
9	9	9	9	9	9	9	9	9	9	9	10	11	12	13	14
10	10	10	10	10	10	10	10	10	10	10	10	11	12	13	14
11	11	11	11	11	11	11	11	11	11	11	11	11	12	13	14
12	12	12	12	12	12	12	12	12	12	12	12	12	12	13	14
13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	14
14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14
15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15

to go in front of, or behind other objects. You have to choose just PENS carefully to achieve the desired results, but this is the way that graphics can be implemented. The listing GRAPHICS and TEXT Ink

MODES shows the effect of this.

Happily, now that you know how these control codes operate, you will experiment for yourself and put your findings to good use.



GET IT RIGHT

HOW regular Shingo Sigiura reviews two products to enhance text on your BBC — Siles, software to sharpen up your listings and Romspell, a spelling error spotter from Watford Electronics

One way to combat Basic's memory restrictions is to use multiple statement lines, omit all unnecessary terms and use single letter output variables. A consequence of this action, however, is that your program becomes really single and impossible to debug. This is where SILES (which, believe it or not, stands for "Super Intelligent List Augmenting System") comes in, as do the publisher's claims:

"Basically, what Siles does is to present your Basic or assembly program such that all multiple statement lines are collapsed, FOR-NEXT and REPEAT-UNTIL loops indented, spaces

inserted where appropriate and keywords are highlighted.

To test it, I *RUN the machine code routine and loaded in a program with lots of multiple statement lines. After pressing **GO**, the routine executed itself by printing "SILES" typing **LIST 4** and **2** then hit the save program in the one step-to-read format. The routine does as first, achieve everything the manual claims and programs are indeed much easier to read. Also, the manual is well written and easy to understand. However, there was one problem with the package.

You are supposed to be able

to run a program which allows you to reconfigure the routine to your own specifications. Unfortunately, loading the disc (as suggested in the manual) promptly crashed my machine, although it worked with another. I can only guess that the program is incompatible with Basic-II.

Apart from the microchoking configuration program, the package worked fine. However, it's much too expensive! **8.5.**

Siles

Price: £8.95 (+ £3 p&h)

Publisher: Aural Software Ltd

Address: 152 Nelson Rd, Southampton, SO9 4WQ, Bournemouth, BH2 2HQ

BBC



Being a regular software reviewer and user, I write a lot of articles. Probably the most boring thing I have to do is looking for spelling mistakes. For reviews, it's not too bad since there are easy and short fast looking through a 2000-word article at 2 o'clock in the morning is not fun! Some mistakes like this are extremely easy to spot but inexperience errors such as this is surprising. It's difficult to find. Obviously, someone at WordPerfect had the same problem since they have come up with WordPerfect, a spell checking for the Mac.

WordPerfect consists of a ROM which contains the checker program and a dictionary that which contains a large selection of words. Typing "KS & KBT" opens WordPerfect's menu page. First you must load in the text you want to check. Now, the file may be checked interactively or in two pages. I will

describe the interactive check first.

On selecting the interactive menu option, the lower part of the screen clears and spell-check commences. Words are displayed on the lower half of the screen as they are checked and the checking continues until an unrecognized word is met.

You can then either correct spelling using the cursor keys or if it is already correctly spelled the dictionary does not contain the word, you can leave the check to recommence.

You can also add the word to the user dictionary if you so desire. This process is repeated until the end of the text is reached. What surprised me most was the number of unrecognized words. The manual claims that the dictionary contains 10,000 words but simple words such as "quickly", "yourside", "vapour" and "rushed" were not

recognized. Of course, these words may be added to the user dictionary with ease so after a few articles, you should have built up a good dictionary with all your favourite words on it.

The most annoying fact about this option is that the screen consisted of a word of more than 13 letters cropped up in the top line. I know reviews do not tend to use words like "dissociationship" but words like "hypersensitizable" are used quite often especially when referring to reactions in peripheral reviews.

In the two pass option, the text is first processed through and all unknown words are marked and stored in the dictionary afterwards. This is much quicker but again, the problem with long words exists.

One very useful option is the "stopword" word check. This allows you to enter a word with

"I" replacing some of the letters. WordPerfect will then check all combinations of those letters. So this option is extremely useful if you are bad at spelling. It is also possible to check words as they are typed in but this is slow and is rather painful.

Overall, the utility worked well and has proved to be useful, especially since the user dictionary has been set up. Once the problem with long words has been solved, I would gladly give this utility a flipped rating.

S.S.

Price: £25.00

Publisher: WordPerfect

Address: Apple House, 250 Lower High Street, Watford

BBC



180!!

Go for that elusive double top and the magic 180!! In this darts game for the Amstrad by Stephen Anderson

If you are an arrow, forget the darts simulation which gives you options to play 501, 504 and 101 games could be what you've been looking for.

One or two players, one up to 10 your computerized ocky and there are four different computer players. Amstrad is followed by being up the top and take players and you have to finish with a double or a bull.

The screen command tells you

Variables

100-1000 score dart rounds
100-1000 score dart rounds

100-1000 score dart rounds

100-1000 score dart rounds

100-1000 score dart rounds

100-1000 score dart rounds

100-1000 score dart rounds

100-1000 score dart rounds

100-1000 score dart rounds

100-1000 score dart rounds

100-1000 score dart rounds

100-1000 score dart rounds

100-1000 score dart rounds

100-1000 score dart rounds

100-1000 score dart rounds

100-1000 score dart rounds

which player is next to throw, calculate total of darts being thrown and the scores of each

player. No need for chalk in the game as the screen will do all the calculations for you

How it works

50-100	add scores	1000-1000	work out score
100-1000	game options	1000-1000	end of game
100-1000	draw graphics	1000-1000	make computer throw
1000-1000	1000	1000-1000	computer scores
1000-1000	computer players	1000-1000	data for connection
1000-1000	game scores	1000-1000	score
1000-1000	game scores	1000-1000	final score
1000-1000	game scores	1000-1000	next option

```

30-100 START SCREEN
40-100 SET HANDS AND HIGH SCORE
50-100 DO(1)
60-100 DO(1)
70-100 DO(1)
80-100 DO(1)
90-100 DO(1)
100-100 DO(1)
110-100 DO(1)
120-100 DO(1)
130-100 DO(1)
140-100 DO(1)
150-100 DO(1)
160-100 DO(1)
170-100 DO(1)
180-100 DO(1)
190-100 DO(1)
200-100 DO(1)
210-100 DO(1)
220-100 DO(1)
230-100 DO(1)
240-100 DO(1)

```



[illegible][illegible]

[illegible]

SUPER SHIELD



There's action galore in this new version of an old favourite from BBC programming HCW regular Stephen Gray

Take the controls of the Shield craft to protect the futuristic inhabitants of Keta VII from death in the hands of the evil Gnomers. You must shoot the Gnomers before they reach the ground, or a human will be lost. Avoid crashing into Gnomers, space mines or the ground.

As the game progresses you get more Gnomers to shoot down and more space mines to avoid too. The game ends when you have lost either 3 ships or 3 humans.

Variables

2% score
12% ship left
6% Gnomers on left on this level
5% human left
2% has a ship been destroyed?
1% Gnomers killed on this level
100% has a Gnomer got a human?
5%, 5% Shield craft on mine
2% is Shield craft facing left or right?
5% did Shield craft mine, if so, in which direction?
50%, 50% Shield craft has no ordnance
50%, 50% co-ordinates of last bomb
5% Temporary X co-ordinates of last bomb
50% BOMB100% is order size of Gnomers shot
100% high score array
50% high score's score entry
5% goal
100% Shield craft
5% space mine
10 human
10 mine

Flow it works

70-100 initialization
100-150 main loop
150-200 Gnomers' position
200-250 Gnomers' procedure
250-300 Gnomers' procedure
300-350 new level procedure
350-400 Gnomers got a human procedure
400-450 high score
450-500 end procedure
500-550 mine procedure
550-600 end of game routine
600-700 main menu screen done

Controls

A — up, Z — down, SHIFT — forward, LEFT/RIGHT — fire, SPACE — random direction

```

70 ON ERROR PROCEED
80 HIDEUPPROC INSTRUCT PROCINCT IPROCINCT
90 STOP(L1=0) GOTO 100
100 "no"
110 HIDEUPPROCINSTRUCT
120 BPS11,4
130 PROCINCT
140 IF G1=1 PROCINCT IF 4,5 GOTO 150
150 IF G1=1 GOTO 160
160 IF B1=0 PROCINCT GOTO 110
170 PROCINCT
180 IF B1=0 GOTO 160
190 IF G1=1 GOTO 150
200 GOTO 130
210 DEF PROCINCT
220 P1=0, P2=0, P3=0, P4=0
230 IF POINT(CX+32, YC-8) THEN (P1+1) ENDPROC
240 IF POINT(CX-32, YC+8) THEN (P2+1) ENDPROC
250 IF POINT(CX, YC) THEN (P3+1) ENDPROC
260 IF POINT(CX, YC) THEN (P4+1) ENDPROC
270 IF POINT(CX, YC) THEN (P5+1) ENDPROC
280 IF POINT(CX, YC) THEN (P6+1) ENDPROC
290 IF POINT(CX, YC) THEN (P7+1) ENDPROC
300 IF POINT(CX, YC) THEN (P8+1) ENDPROC

```


1. The first step in the process of creating a program is to determine the requirements. This involves talking to the user and understanding what they need the program to do. Once the requirements are clear, the next step is to design the program. This involves creating a flowchart or pseudocode that outlines the logic of the program.

2. After the design is complete, the next step is to write the code. This involves translating the design into a programming language. There are many programming languages available, each with its own strengths and weaknesses. The choice of language will depend on the requirements of the program and the skill level of the programmer.

3. Once the code is written, the next step is to test the program. This involves running the program with various inputs and checking the outputs to make sure they are correct. Testing is an important part of the process because it helps to catch errors before the program is released to the user.

4. Finally, once the program has been tested and found to be correct, it can be released to the user. This involves installing the program on the user's computer and providing them with instructions on how to use it.



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BINARY CHOP

Faster than the eye can follow — this Spectrum routine will speed your searching tremendously. It is yet another utility from Diana Smith

In the 8th April issue of *HCW* we gave you a very efficient routine for sorting arrays called Quicksort. This could be used in your own desktop programs to replace any direct sort method. Having sorted an array, you will need to find a record in it (or array applications). Here is the Binary Chop — no relation to pork, but a Karen Blow has a very quick method of matching a record in a sorted array.

Many published programs use a FOR NEXT loop to check each record in a file until a match is found. If the record you want is at the opposite end of the file from which you start checking, you can have a long wait.

Binary chop works like this. Suppose you want to find a phone number for Smith in a telephone directory. You open the directory halfway and might find names beginning with M. You can immediately ignore the first half of the directory. Look halfway through the remaining pages and you might find names beginning with P. Smith is then in the last quarter of the directory. Look halfway

1 KBW BINARY-CHOP TEST PROGRAM

```

10 DEF FN t()=(555333+PEEK 2367
4+255*PEEK 23673+PEEK 23675)/55
999 REM Generate array
1000 CLS : INPUT "Enter number o
f records. ";records
1010 DIM a$(records,4)
1020 FOR n=1 TO records
1030 LET a$(n)=(4000+5755 n)(LE
N 5755 n TO )
1040 PRINT "Record ";n;" = ", IN
VERSE 1;a$(n)
1050 POKE 23692,255: NEXT n
1060 REM Search requirement
2000 DIM m$(4)
2010 INPUT "Enter a 4 character
number with leading zeros. ";m$
( TO 4)
2020 REM Sequential search
3000 CLS : LET start=FN t()
3010 PRINT "Sequentially searchi
ng for record "; INVERSE 1;
m$
3020 LET matchfound=0: LET c=0
3030 FOR n=1 TO records
3040 LET c=c+1: IF m$=a$(n) THEN
LET matchfound=1: GO TO 3060
3050 NEXT n
3060 LET stop=FN t()
3070 LET time=stop-start
3080 PRINT "Match ";("not " AND
matchfound=0);"found";"a:" check
s in ":"time;" seconds";""
3090 REM Binary chop
4000 LET start=FN t()
4010 PRINT "Binary-chop search f
or record "; INVERSE 1;m$
4020 LET upperlimit=records
4030 GO SUB 5000
4040 LET stop=FN t()
4050 LET time=stop-start
4060 PRINT "Match ";("not " AND
matchfound=0);"found";"a:" check
s in ":"time;" seconds";""
4070 REM Repeat?
5000 INPUT "Another test (y/n)?
";b$
5010 IF b$="y" THEN GOSUB
5020 STOP
5030 REM Binary-chop
5040 LET lowerlimit=1
5050 LET c=0
5060 LET c=c+1
5070 IF upperlimit<lowerlimit TH
EN LET matchfound=0: RETURN
5080 LET i=INT ((upperlimit+lowe
rlimit)/2)
5090 IF m$(i) THEN LET upper
limit=i-1: GO TO 5060
5100 IF m$(i) THEN LET lower
limit=i+1: GO TO 5060
5110 LET matchfound=1: RETURN

```


RUPERT

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Spectrum 48K
CBM64

Rupert Bear © Express Newspapers PLC



Readers hi-score table

Name	Score	Machine	Score
P.A. O'Connell	High score	Spoutman	230,480
Paul M. Martin	Robbed Coin	Aminal	1,587.88
	Pyromania	Aminal	997.4 (unbeaten)
	Master Match	Aminal	48,933
	Robbed In Time	Aminal	71 (unbeaten)
	Electric Pinball	Aminal	2,840

All the pokas fit to print

Paul Lucas from Posters Bar has some handy pokas for the C64 and Spectrum.

C64 — Poka 000, the turn on light key repeat and Poka 001, 211 stops the stop repeat key.

Spectrum — Poka 0000, on for any number from 1 to 255 the stop repeat key and Poka 0000, 8 makes all letters appear as capitals. 20050.0 returns them to normal use.

Just type in the number to use, or use the key repeat key to repeat the number. When you see the title on top of the screen press stop on tape and press break. Then type in the program.

```

@BORDER 0 PAPER:PRG
@C1,EAR 3470
@BOARD 1174,ELNS
@1,0URP,CYR:0000
@1,0URP,CYR:0000
@1,0URP,CYR:0000
@1,0URP,CYR:0000
@1,0URP,CYR:0000
@1,0URP,CYR:0000
@1,0URP,CYR:0000
@1,0URP,CYR:0000

```

This is a small program to give infinite lives for Alex 3 on the Aminal CPM, 104, from A. O'Connell of Birmingham, Cleveland.

```

20 open: 100
20 money: 100
30 for: 100
40 for: 100
50 read: 100
60 poke: 100
70 poke: 100
80 poke: 100
90 poke: 100
100 poke: 100
110 poke: 100
120 poke: 100
130 poke: 100
140 poke: 100
150 poke: 100
160 poke: 100
170 poke: 100
180 poke: 100
190 poke: 100
200 poke: 100

```

Cardiff	10
Torquay	12
Leicester	20
Birmingham	21

Derby?



Derby Distance

Now for accuracy to the nearest inch of the tape, it is Derby!

CANTEEN SELF-SERV



READERS PAGE



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